seems to have been a good year for this generally), *Anaplectoides prasana* Schiff., *Orthosia advena* Schiff., *Leucania obsoleta* Hübn., *Leucania vitellina* Hübn., *Nonagria sparganii* Esp., *Caradrina ambigua* Schiff., *Nycteola revayana* Scop., *Cosymbia pendularia* Clerck, *Plemyria rubiginata* Schiff., *Eupithecia succenturiata* L., *Apeira syringaria* L., *Ectropis consonaria* Hübn.

MIGRANTS. The number of species occurring was up to standard, but the number of specimens in most species was well down. The details are:—*Lithosia quadra* L. (9, including, for the first time in the trap, 2 females); *Agrotis ipsilon* Hufn. (322), *Peridroma porphyrea* Schiff. (67), *Leucania vitellina* Hübn. (2), *Laphygma exigua* Hübn. (1), *Plusia gamma* L. (291), *Rhodometra sacraria* L. (2), *Nycterosea obstipata* Fab. (10), *Diasemia ramburialis* Dup. (1), *Palpita unionalis* Hübn. (1), *Nomophila noctuella* Schiff. (86), *Udea ferrugalis* Hübn. (19), *Plutella maculipennis* Curt. (2).

A warm spell early in the year resulted in the unusually early appearance of several species, among which were—*Biston strataria* Hufn., 30.i.; *Nomophila noctuella* L., 30.i.; *Xylocampa areola* Esp., 1.ii., *Apocheima hispidaria Fab.*, 3.ii.; *Orthosia gothica* L., 18.ii.; *Agrotis ipsilon* Hufn., 31.iii.; *Xanthorhoë fluctuata* L., 16.iv.; *Eupithecia nanata* Hübn., 17.iv.; *Spilosoma lubricipeda* L., 19.iv.; *Apatele rumicis* L., 22.iv.; *Thera firmata* Hübn., 22.iv. (this is the first time I have recorded this early brood, although the later one is quite common).

Some late records are also of interest—*Semiothisa alternaria* Hübn., 10.ix.; *Thyatira batis* L., 11.ix.; *Agrotis exclamationis* L., 15.x.; *Phlogophora meticulosa* L., 21.xii.

Phigalia pedaria Fab. was taken on 30.xi. and 21.xii.

POLYMORPHISM

Biston betularia L.
typical 115 (84%)
carbonaria 7 (5%)
insularia 15 (11%)

Sterrha aversata L.
remutata 80 (71%)
aversata 32 (29%)

Alcis repandata L. Typical 89, *conversaria* 8.
Apamea crenata Hufn. Typical 17, *alopecurus* 2.
Ectropis biundularia Borkh. (and *crepuscularia* Hübn.) Typical 16, melanic 1.
Eilema deplana Esp. Typical 6, *unicolor* 1.
Eilema griseola Hübn. Typical 4, *flava* 2.

REFERENCE

Siggs, L. W. New Forest Mercury Vapour Light Records for 1966. *Ent. Rec.*, **79**: 144.

Sungate, Football Green, Minstead, Lyndhurst, Hants.

Insects at light: Hilton, Natal

By J. S. Taylor

During the summer of 1965/6, and again in the following year, observations on insects attracted by light were carried out at Hilton, Natal, similar to those at Wilderness, C.P., in 1964/5 (*Ent. Rec. & Jl. Var.*, **78**: 73-75, 1966). At Hilton, the light was an ordinary 100 watt bulb

suspended in front of a sheet on the porch of our house. Hilton is situated in the mist belt at an altitude of some 3,700 feet and is eight miles from Pietermaritzburg. The climate is normally cool and damp on account of the mists which generally prevail throughout the spring and summer months. During this period the mist often comes over in the afternoon, and may persist for several days, while it is not unusual for the sun to be completely obscured for a number of days at a time. The country round about is mainly grassveld, much of which is now under Black Wattle (*acacia mollissima*). Very little of the indigenous bush has been left, while Hilton itself is an expanding residential area, with numereous houses and gardens.

During the summer of 1965/6 the light was operated from mid-December until May, and in the following season from January 7—which happened to be the first night in that summer on which conditions appeared to be suitable—until April 15th, just two weeks before my departure from Hilton. Conditions during the second summer (1966/7) were particularly cool and damp, with many nights unfavourable to insect activity. During this summer a collection of Microlepidoptera was made.

As at Wilderness, C.P., the insects at light at Hilton were both varied and numerous, with most orders represented. Among the Orthoptera, a large black species of Blattidae was often present, especially early in the season. Both field and tree crickets were also seen, but mole crickets, which were such a feature at Wilderness, were entirely absent. Several species of Mantidae were noted, also grasshoppers, an occasional katydid, and once a specimen of the Brown Locust (*Locusta pardalina* Wlk.). Although the pneumorid *Bulla longirostris* St., occurs in the area fairly commonly, several specimens being taken by neighbours at light during the same period, none was seen at my light. Neither were any Forficulidae, which had been such a noteworthy feature at Wilderness. Once, a species of Plecoptera was recorded at Hilton; Ephemoptera were noted at times, and included a large species, measuring some 50 mm. in length.

The Neuropetra were represented mainly by smallish Myrmelionidae, an ascalaphid and a few Chrysopidae. On one occasion—7.i.67—a very large species of lacewing was taken, much the largest I have ever seen. It was a particularly beautiful insect; the green body, measuring 15 mm. in length, had a series of dark spots on either side forming a lateral line. The wings, which had a bluish tinge, measured some 22 mm. in length. Only one specimen was seen. Dr. Bo Tjeder, of the University of Lund, Sweden, to whom it was subsequently submitted, reported it to be *Italochrysa gigantea* (McL.), "a very uncommon species"

Coleoptera were well represented, and among them several small species of Staphylinidae were particularly numerous. Small and moderate-sized Scarabaeidae were often present, while a large species of dynastid, last met with at Barberton, Transvaal, many years before, was sometimes recorded. Cerambycidae were not so abundant as at Wilderness, although several were noted, while one very small species was almost always present. Small Carabiidae were frequently seen.

Among the Diptera, Tipulidae were often noted, including several large species, one of which had a wing-span of at least 2½ inches. Various small flies and gnats were numerous at times, and a large male tabanid, similar to the one noted at Wilderness, occurred fairly often.

Hemiptera were well represented, especially by various species of

Reduviidae, as is usually the case at light in Africa Pentatomidae were also often seen, likewise Coreidae and Capsidae. Of the Homoptera, a small greenish yellow species of Jassidae was generally present; a large cercopid was noted from time to time, and a large cicada occasionally.

Lepidoptera were generally abundant, particularly the micros.

It was particularly interesting to note that during the late summer of 1965-66 when a widespread migration of *Catopsilia florella* (Fabr.) (Pieridae) was in progress in Natal and other parts of South Africa, migratory species of moths were much in evidence at light and elsewhere. Although some of these, such as *Heliothis armigera* Hbn., and *Nomophila noctuella* Schiff., are liable to appear almost anywhere and at any time in South Africa, they were more than normally in evidence during this migration, as were other migratory species including *Rhodometra sacraria* L., and *Utetheisa pulchella* L. Both these species were also observed in considerable numbers during daylight feeding at lucerne and *Senecio* flowers at Potgietersrus, Transvaal, during the latter half of April. *R. sacraria* was particularly abundant there, and never have I seen such a concentration of this species. It was interesting, too, to meet old ecquaintances such as *Gynanisa maia* Klug., and *Heniocha appolonia* Cram., both of which came to light occasionally at Hilton. Another saturniid noted at Hilton was *Nudaurelia wahlbergi* Boisd. The larvae of these three species of Saturniidae have been recorded on wattle, but I was unsuccessful in finding any locally, although remains of the adult of *H. appolonia* were noted occasionally in the neighbouring plantations. Another old acquaintance was *Siccia caffra* Walk., which was often present at light. The larva of this species sometimes occurs in large numbers and causes a nuisance by invading porches and verandahs, crawling up the walls seeking pupation quarters. Hitherto all attempts to find the host have been unsuccessful. Similarly at Hilton, where the larva was also common. Another arctiid, of frequent occurrence at light at Hilton, was *Cyana pretoriae* Distant. The larva, too, was often seen, but the host-plant remains unknown. Among other species of Arctiidae were *Dionychopus amasis* Cram., and *D. similis* Mschl., also *Teracotona submacula* Walk. The male of *Metarctia meteus* Stoll. (*Syntomidae*) was also seen at light from time to time. Some years ago the larva was recorded on grass in the Eastern Cape. The female has vestigial wings. Among the Noctuidae were such well-known species as *Earias biplaga* Walk., *Grammodes stolida* Fabr., and *Phytometra orichalcea* Fabr. Various species of Lymantriidae occurred commonly, including *Euproctis iridescens* Janse, the larva of which was frequently found on a variety of plants. Another lymantrid at light was *Psalis pennatula* (Fabr.), which was also reared from the larva found on grasses at Hilton. Of the Geometridae, one of the commonest species at light was *Semiothisa simplicita* Warr., which throughout the period it was present at light was often seen in the wattle plantations. The larva has been recorded on wattle foliage. Sphingidae occurred occasionally, and included *Macroglossum trochilus* Hbn. Although several species of Lasiocampidae were recorded from time to time, *Braura truncata* Walk., a well-known species on wattle and common in the area, was not noted at light at Hilton.

Microlepidoptera were numerous, and Mr. S. N. A. Jacobs has kindly provided a list of determinations of a collection sent to him. Crambids were particularly abundant, and included a species previously only

associated with rice. Rice, however, is not grown at or near Hilton. Pyralidae were likewise numerous, and included *Uresphita gilvata* Fab.,—previously reared from cultivated Broom—*N. noctuella* and *Mesgrapha martialis* Guen. Several species of Adelidae with very long antennae occurred commonly. These included *Ceromitia amphichroa* Meyr., *C. flavicoma* Meyr., and *C. wahlbergi* Zeller. The last-mentioned species was also recorded at light at Wilderness, C. P. Tortricidae were likewise much in evidence; especially *Tortrix capensana* Walk., a common and widespread species, with numerous host-plants, including ivy growing on the wall of our house at Hilton.

The syntomid *Thyretes hippotes* Cram., which was the commonest species of moth at light at Wilderness, C.P., was not recorded at Hilton.

Hymenoptera were represented mainly by parasitic wasps and by various ants, including the ferocious-looking but innocuous male of the Driver Ant *Dorylus helvolus* L. Individuals of the Hive Bee *Apus mellifera* were also present at light from time to time.

I am much indebted to Mr. S. N. A. Jacobs, and to Drs. Bo Tjeder, E. C. G. Pinhey and L. Vari for their kind assistance in identifications.

3 Aird's Court, Westgate, Crail, Fife. 29.xii.67.

New Subspecies in the Genus *Zygaena* Fabricius* (Lep., Zygaenidae)

By Hugo Reiss, Stuttgart

Zygaena (Mesembrynus) cynarae Esper ssp. **slovakica** n. subsp.

Zygaena cynarae Esper is one of the most interesting species. Its known localities are generally widely separated, consequently the various populations differ in their isolated biotopes. Such an example is shown in 45 ♂ and 7 ♀ that Mr. J. Smelhaus, Prague, sent my son. These specimens are ex coll. Dr. R. Schwarz and are labelled as follows: Slovakia occ. Laksarska—Nova Ves, from the Zahorska nizina (Zahorska Plain) ca 45 km north of Bratislava. The specimens were collected or were reared ex larva on the following dates: v.1947; v.1948; vi.1949; 9.vii.1950; v.1951; 27-30.vi.1951; 9.vii.1952; vi.1960; 26, 28.vi.1961. According to Dr. Schwarz the foodplant is *Peucedanum oreoselinum* Moench.

According to material in my collection, the Slovakian race differs from all known races of *cynarae*. The nominate race was described from Lemberg (Lwów), Galicia (Esper, 1789). Holik (1932: 115) has written on this subspecies and figured specimens from Janów, 20.vii.1931, leg. Swiatkiewicz. Of the nominate subspecies I possess material, labelled: Janów, Lwów, 15.vii.1932, leg. Swiatkiewicz, ex coll. Niesiolowski, with a wing span of 35 mm. in the ♂. Compared with the nominate race, the subspecies from Slovakia is smaller, with a wingspan of 28-33 mm. in the ♂ and 30-34 mm. in the ♀. The red of the forewing spots and the hindwings is lighter. The apex of the forewing is less rounded. Spots 3, 4 and 5 are larger, 3 and 4 are generally narrowly separated from each other. In addition, the dark border of the hindwing is narrower. The red abdominal ring is distinct, in the ♂ only sometimes dusted with

*The placing of the species into their respective subgenera *Mesembrynus* Hübner, *Agrumenia* Hübner and *Zygaena* Fabricius follows Reiss (1958).